

**REMARKS**

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

**Disposition of Claims**

Claims 1-8 were pending in this application. By way of this reply, claim 23 has been added. Claim 1 is independent. The remaining claims depend, directly or indirectly, from claim 1.

**Claim Amendments**

By way of this reply, claim 1 has been amended to specify that the outer surface does not include any of polishing marks, grinding marks, and chamfering marks. No new matter has been added by way of the amendments to claim 1, as support for these amendments may be found, for example, paragraph [0021] of the publication of the Specification.

**Rejection(s) under 35 U.S.C. § 102**

Claims 1-5 and 8 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,537,648 issued to Takahashi *et al.* (hereinafter “Takahashi”). For the reasons set forth below, this rejection is respectfully traversed.

One or more embodiments of the invention are directed to a molded glass substrate for a magnetic disk. As shown in Figure 1 of the application, a molded glass substrate 11 in accordance with one or more embodiments of the invention comprises principal surfaces 12, a molding-free face 13, and an inner surface 14. The molding-free face 13 joins principal surfaces 12, which are formed by press molding (*see, e.g.*, publication of the Specification,

paragraph [0042]). This results in the transcription of the surfaces of a molding die onto principal surfaces 12. In other words, imperfections on the surface of a molding die also exist on surfaces of a molded substrate.

The molding-free face 13, however, is not controlled by a processed surface of a die during molding (*see, e.g.*, publication of the Specification, paragraph [0043]). Accordingly, a molding-free face has a smooth, mirror-finished surface that requires no surface finishing, and is physically distinguishable from a molded surface or a ground surface, which contains marks from molding, grinding, polishing, chamfering, *etc.* In other words, the outer surface does not include any of polishing marks, grinding marks, and chamfering marks (*see, e.g.*, publication of the Specification, paragraphs [0021], [0044]). Accordingly, independent claim 1 requires an outer surface joining the upper and lower principal surfaces, where the outer surface is a molding-free face, and where the outer surface does not include one selected from the group consisting of polishing marks, grinding marks, and chamfering marks.

It would be clear to one skilled in the art that Takahashi does not disclose an outer surface as required by the claimed invention. In clear contrast to the claimed invention, Takahashi discloses obtaining a disk-shaped glass substrate through the use of multiple dies or from cutting. Takahashi clearly teaches the use of grinding to form an end face. Takahashi explicitly states: "...an outer peripheral end face was ground to reduce the diameter to 65 mm," and that "the outer peripheral end face and an inner peripheral surface were subjected to predetermined chamfering" (*see* Takahashi, col. 14, line 64 – col. 15, line 1). As discussed above, a ground or chamfered surface contains marks from the grinding or chamfering that are not present an outer surface as required by the claimed invention.

Regardless of the Examiner's interpretation that a molding-free face is a product-by process limitation, it would be clear that an outer surface that does not include any of

polishing marks, grinding marks, and chamfering marks, as required by the claimed invention, is not a product-by process limitation. Further, it would be clear to one skilled in the art that the end surface of Takahashi has polishing, grinding, or chamfering marks, and that Takahashi does not disclose an outer surface as required by the claimed invention.

Thus, a clearly distinguishable structural difference exists between an outer surface of a molded glass substrate of the prior art and an outer surface as required by the claimed invention. As the outer surface of the claimed invention is inherently smooth, the outer surface does not require grinding, chamfering, or polishing, and a substrate is obtained that is more cost-effective than ground, chamfered, or polished surfaces of the prior art (*see, e.g.*, publication of the Specification, paragraphs [0008], [0011]). Thus, an outer surface, as required by the claimed invention, does not include any of polishing marks, grinding marks, and chamfering marks.

In view of the above, Takahashi fails to show or suggest the present invention as recited in independent claim 1. Thus, independent claim 1 is patentable over Takahashi. Claims 2-5 and 8, directly dependent from claim 1, are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

### **Rejection(s) under 35 U.S.C. § 103**

Claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as being obvious over Takahashi in view of U.S. Patent No. 3,660,061 issued to Donley *et al.* (hereinafter “Donley”). For the reasons set forth below, this rejection is respectfully traversed.

As discussed above, Takahashi fails to show or suggest all the limitations of independent claim 1. Donley also does not show or suggest all the limitations of independent claim 1. Further, Donley fails to show or suggest that which Takahashi lacks. This is evidenced

by the fact that Donley is relied on only in an attempt to render obvious limitations relating to grinding and polishing a surface and fire polishing a surface (*see* Office Action of June 30, 2005, pages 4-5). In contrast to the claimed invention, Donley is directed to producing a coated sheet of glass to provide desired properties to the glass (*see* Donley, Abstract). In contrast to the claimed invention, it would be clear that surfaces as taught by Donley require polishing, grinding, or chamfering. Further, Donley is completely silent with respect to an outer surface that does not include any of polishing marks, grinding marks, and chamfering marks, as required by independent claim 1 of the invention.

In fact, as Donley is directed to coating sheets of plate glass (*see* Donley, col. 8, lines 27-30) and not to molded glass substrates, it would be clear that without the present application as a guide, one skilled in the art would not look to Donley to address issues related to molded glass substrates. The present application *cannot be used as a guide* in reconstructing elements of prior art references to render the claimed invention obvious. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (emphasis added). Thus, Donley is not properly combinable with Takahashi.

In view of the above, Takahashi and Donley, (i) whether taken separately or in combination, fail to show or suggest the present invention as recited in independent claim 1, and (ii) are not properly combinable. Thus, claims 6 and 7, directly dependent from claim 1, are patentable over Takahashi and Donley. Accordingly, withdrawal of this rejection is respectfully requested.

### New Claim

By way of this reply, new claim 23 has been added to specify that the inner surface comprises a rounded edge without corners. No new matter has been added by way of

new claim 23, as support for new claim 23 may be found, for example, in paragraph [0024] of the publication of the Specification. Claim 23 depends from claim 1. As claim 1 has been shown above to be allowable, claim 23 is allowable for at least the reasons discussed above with respect to claim 1. Accordingly, entry and allowance of new claim 23 is respectfully requested.

**Conclusion**

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 04558/053001).

Dated: November 20, 2006

Respectfully submitted,

By   
Thomas K. Scherer  
Registration No.: 45,079  
OSHA · LIANG LLP  
1221 McKinney St., Suite 2800  
Houston, Texas 77010  
(713) 228-8600  
(713) 228-8778 (Fax)  
Attorney for Applicant